

**What is Claimed:**

1. A method of dynamically managing a computer system having a plurality of processors, comprising:  
 identifying a first set of computer-readable instructions whose processing is to be managed;  
 assigning the first set of computer-readable instructions to at least one of said plurality of processors where said first set of computer-readable instructions can execute; and  
 automatically adjusting the number of processors where said first set of instructions can execute by adding or deleting a processor that said first set of instructions can execute on based on processor usage in the system.
2. The method of claim 1 wherein the first set of computer-readable instructions comprise a computing thread.
3. The method of claim 1 wherein the first set of computer-readable instructions comprise an application program.
4. The method of claim 1 wherein the processor usage is based on the CPU utilization for the computer-readable instructions.
5. The method of claim 4 wherein the CPU utilization is normalized for the CPUs in the number of processors that the first set of instructions can run on.
6. The method as recited in claim 1 comprising identifying a second set of computer-readable instructions wherein said first set of computer-readable instructions and said second set of computer-readable instructions comprise an application group.
7. The method as recited in claim 6 wherein the application group is assigned to a common set of processors whose number is automatically adjusted.
8. The method as recited in claim 1 wherein said first set of computer readable instructions are elevated in priority class before estimating processor usage.
9. The method as recited in claim 1 wherein the processor usage comprises an average processor usage taken over a predefined interval.

10. The method as recited in claim 1 where the act of automatically adjusting the number of processors compares the processor usage to a threshold value.

11. The method as recited in claim 10 wherein the threshold value for adding a processor is above about 85% of CPU utilization on the processors that the first set of instructions is executing on.

12. The method as recited in claim 10 wherein the threshold value is for deleting a processor is below about 65% of CPU utilization on the processors that the first set of instructions is executing on.

13. A system for dynamically managing a computer system having a plurality of processors, comprising the steps of:

at least one processor;

a computer memory device in communication with said at least one processor bearing computer computer-executable instructions capable of identifying a first set of computer-readable instructions whose processing is to be managed;

a computer memory device in communication with said at least one processor bearing computer-executable instructions capable of assigning the first set of computer-readable instructions to at least one of said plurality of processors where said first set of computer-readable instructions can execute; and

a computer memory device in communication with said at least one processor bearing computer-executable instructions capable of automatically adjusting the number of processors where said first set of instructions can execute by adding or deleting a processor that said first set of instructions can execute on based on processor usage in the system.

14. The system of claim 13 wherein the first set of computer-readable instructions comprise a computing thread.

15. The system of claim 13 wherein the first set of computer-readable instructions comprise an application program.

16. The system of claim 13 wherein the processor usage is based on the CPU utilization for the computer-readable instructions.

17. The system of claim 16 wherein the CPU utilization is normalized for the CPUs in the number of processors that the first set of instructions can run on.
18. The system of claim 13 comprising a computer memory device in communication with said at least one processor bearing computer executable instruction capable of identifying a second set of computer-readable instructions wherein said first set of computer-readable instructions and said second set of computer-readable instructions comprise an application group.
19. The system of claim 18 wherein the application group is assigned to a common set of processors whose number is automatically adjusted.
20. The system of claim 13 wherein said first set of computer readable instructions are elevated in priority class before estimating processor usage.
21. The system of claim 13 wherein the processor usage comprises an average processor usage taken over a predefined interval.
22. The system of claim 13 where the computer memory device bearing computer-executable instructions capable of automatically adjusting the number of processors is capable comparing the processor usage to a threshold value.
23. At least one computer-readable medium bearing computer-readable instructions of dynamically managing a computer system having a plurality of processors, comprising:
  - instructions for identifying a first set of computer-readable instructions whose processing is to be managed;
  - instructions for assigning the first set of computer-readable instructions to at least one of said plurality of processors where said first set of computer-readable instructions can execute;
  - and
  - instructions for automatically adjusting the number of processors where said first set of instructions can execute by adding or deleting a processor that said first set of instructions can execute on based on processor usage in the system.
24. The computer-readable medium of claim 23 wherein the first set of computer-readable instructions comprise a computing thread.

25. The computer-readable medium of claim 23 wherein the first set of computer-readable instructions comprise an application program.

26. The computer-readable medium of claim 23 wherein the processor usage is based on the CPU utilization for the computer-readable instructions.

27. The computer-readable medium of claim 26 wherein the CPU utilization is normalized for the CPUs in the number of processors that the first set of instructions can run on.

28. The computer-readable medium of claim 26 comprising instructions for identifying a second set of computer-readable instructions wherein said first set of computer-readable instructions and said second set of computer-readable instructions comprise an application group.

29. The computer-readable medium of claim 28 wherein the application group is assigned to a common set of processors whose number is automatically adjusted.

30. The computer-readable medium of claim 23 comprising instructions for elevating said first set of computer readable instructions in priority class before estimating processor usage.

31. The computer-readable medium of claim 23 wherein the processor usage comprises an average processor usage taken over a predefined interval.

32. The computer-readable medium of claim 23 where the instructions for automatically adjusting the number of processors compares the processor usage to a threshold value.